

**Testimony of Doug Harrison
General Manager, Fresno Metropolitan Flood Control District
Before the California State Water Resources Control Board**

**Witness Testimony on Behalf of Petitioner:
Request for Stay of Permit, SWRCB/OCC File No. A-1448**

Los Angeles, California; March 25, 2002

The evolution of stormwater regulation has moved much faster than has the science and economics needed to effectively direct the stormwater program. The request for a Stay of Permit is not just a request for a temporary permit delay, but a request for the opportunity to create the type of stormwater program envisioned by the Congress in the 1987 Clean Water Act.

The Congress clearly recognized stormwater's unique character and created a "BMP/MEP" approach that gave consideration to the inherent technical and financial challenges. This type of stormwater program would also be consistent with the "practicable" program described in the February 11, 1993 memo from the State Board General Counsel's Office, which presented the following interpretation of "Maximum Extent Practicable".

- "1. Effectiveness: Will the BMP address a pollutant of concern?
- "2. Regulatory Compliance: Is the BMP in compliance with stormwater regulations as well as other environmental regulations?
- "3. Public Acceptance: Does the BMP have public support?
- "4. Cost: Will the cost of implementing the BMP have a reasonable relationship to the pollution control benefits to be achieved?
- "5. Technical Feasibility: Is the BMP technically feasible considering soils, geography, water resources, etc.?

Action by your Board which facilitates the Congressional objective and is consistent with the "MEP" standard most certainly satisfies the findings required for the requested Stay.



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The dilemma facing the State Board (the crafting of an effective implementable stormwater quality management program) is not unique to California or the nation. It is the focus of science, government and citizen energy throughout the industrialized world. The international discussion on stormwater quality management issues was highlighted in the August 2001, United Engineering Foundation, Inc. program on “Linking Stormwater BMP Design and Performance To Receiving Water Impact Mitigation”; and gives support to three specific conclusions.

1. Stormwater pollution and quality management is a global, societal problem.
2. The magnitude of the stormwater issue, the extent of the unknown, and the immensity of an acceptable control methodology, will require many years for a provable result.
3. Regulatory initiatives involving the lifestyle changes and economic reallocations inherent in stormwater control programs require statewide strategic planning.

Stormwater Quality, a Global Societal Program

Stormwater runoff quality is the direct product of all physical, ecological and biological activity that occurs outdoors. Natural wildlife, vegetation, soils, wetlands and automobiles all produce constituents which are defined as pollutants in the current generation of NPDES permits. In the urban environment, stormwater quality variables include everything; your driving habits, home, pastimes, family pet, employer’s environmental consciousness, and more.

Dr. Edwin E. Herricks, University of Illinois, Urbana (2001), describes the problem of defining urbanization’s impacts as follows: “The question: ‘What do we know about impacts of urbanization on receiving water?’ can be easily answered. We know a lot, and we know almost nothing. ‘...The spatial temporal scales of urbanization require recognition that water quality conditions are related to both regional and local factors, which can vary across space and time.’ (Angermeir and Winston, 1998)⁽¹⁾

In view of the ubiquitous nature of stormwater-borne pollutants, attempting to eradicate these pollutants by regulating storm drains is analogous to attempting to eradicate poverty by regulating grocery stores that receive food stamps.

It should also be acknowledged that the stormwater regulatory program is the only program which does not target the true source of the pollutants. Typical permits address the owner of the discharge, and the generator of the pollutant. Air quality regulations target both the fixed and mobile generators. Both programs address those who have authority to control the producers of the pollutants. Stormwater regulations are focused only on owners of the pipelines. Many have no land use authority and few have commerce powers to control the manufacturing, distribution and use of the products of concern.

Solutions Will Take Significant Time

Early in the stormwater permit experience, it was assumed the incorporation of the Limited Impact Development (LID) concept would produce the desired receiving water quality result. After twelve years of NPDES-driven permits however, Thomas R. Shueller, Executive Director of the Center for Watershed Protection (2001) stated,

“The increased pollutant discharge over such wide suburban land uses suggests that current STPs [LIDs], even when combined with site design techniques, cannot consistently meet a zero or low impact threshold for moderately developed sites or within urbanizing watersheds.”⁽¹⁾

Many felt, as did Bill Jennings of the Delta Keepers, who recently told the State Storm Water Quality Task Force (SWQTF), that the nation’s complex waste management failure could be resolved by simplifying the target by establishing end-of-pipe numeric limits for storm drains; that receiving water goal attainment was as simple as writing numeric permit limits. In the case of stormwater however, permits cannot drive applied science because the basic research is not yet adequate. Dr. Herricks states, “...we have an abundance of studies that show change, but few studies that confirm cause and effect relationships...”⁽¹⁾

Peter S. Mikkelsen, Technical University of Denmark, (2001), in reporting on stormwater management in Denmark and Sweden states, “...so far, there are no experimental studies that characterize changes of receiving water quality caused solely by stormwater BMPs.”⁽¹⁾ He reported on the European Union’s Water Framework Initiative, adopted in December 2000. It provides three years for adoption, a six-year period to develop standards and monitoring

programs, and a fifteen-year period to achieve water quality objectives. Even with this broad framework and time period, there is no specific detail applied to stormwater, providing the opportunity for the scientist and professional to help shape functional programs.

Need for a Statewide Strategic Plan

The State is now in a difficult situation. Because it was not possible for municipal dischargers to attain the expectations associated with the initial permits, new permits with more difficult goals were imposed. And as those expectations have not been met, permits with impossible goals have been proposed. Dennis Dickerson, Executive Officer of the Los Angeles Regional Water Quality Control Board described our current condition in his comments to the National Urban Watershed Conference (October 2001), stating, ‘We have now made litigation an economically viable alternative to regulatory compliance and water quality management’ (paraphrased).

The inappropriateness of a numeric limit permit for stormwater is also not just a California conclusion. Ian Lawrence of the Cooperative Center for Freshwater Ecology, University of Canberra, Australia (2001) wrote the following:

“...authorities resort to adoption of ambient water quality criteria as the water quality protection objective, with the onus on the applicant to demonstrate that a development will not exceed the criteria. Invariably, this approach fails, as neither the applicant or the regulatory or approval authority has the means to make the link between the two. ...the parties resort to the application of prescriptive measures, as evidence that the protection issue has been addressed.”⁽¹⁾

The problem also is not that California municipalities have been lacking in their initiative to implement programs and produce results. At the March 15, 2001 SWQTF meeting, EPA enforcement officials praised the degree California municipalities were aggressively ahead of the rest of the nation.

The Board’s dilemma is that the stormwater program requires a strategic management construct that includes fundamental principles which frame and guide individual initiatives. This includes

the concept of “adaptive management”, which reconciles short-term limitations with long-term objectives. Ian Lawrence also addresses this concept in the Australian experience.

“Not with standing the advances in bio-geochemical processes and pathways, the research indicates the enormous complexity of a number of these processes, and consequently, some uncertainty in outcomes. Adaptive management based approaches are commonly adopted, in which decisions are based on the best available information, together with a performance monitoring and review process.”⁽¹⁾

Conclusion

The granting of the requested stay is not an end. It must be linked to a State Board initiative leading to a statewide, state-driven, stakeholder supported, consensus based work effort that produces a program which (1) facilitates adaptive management; (2) creates a level playing field for all; (3) provides incentive for research and experimentation; (4) bases mandates on practicability; and (5) avoids penalties for failure to achieve the impossible.

(1) Program: “Linking Stormwater BMP Designs and Performance To Receiving Water Impacts Mitigation”; August 19-24, 2001, Snomass, Colorado; United Engineering Foundation, Inc.